

Florida

The Ways of Wildlife
Autumn Arrows

Fishing • Hunting
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Outdoor Recreation

WILDLIFE

AUGUST 1970

The Florida Magazine for all Sportsmen

25 CENTS



Wallace
Hogges

Florida Wildlife Scrapbook

BIRD NOTES

SMALLEST BIRD
IN THE WORLD
IS THE CUBAN
BEE HUMMINGBIRD
• LENGTH $2\frac{1}{4}$
INCHES • WEIGHT
ABOUT THAT OF
A DIME •



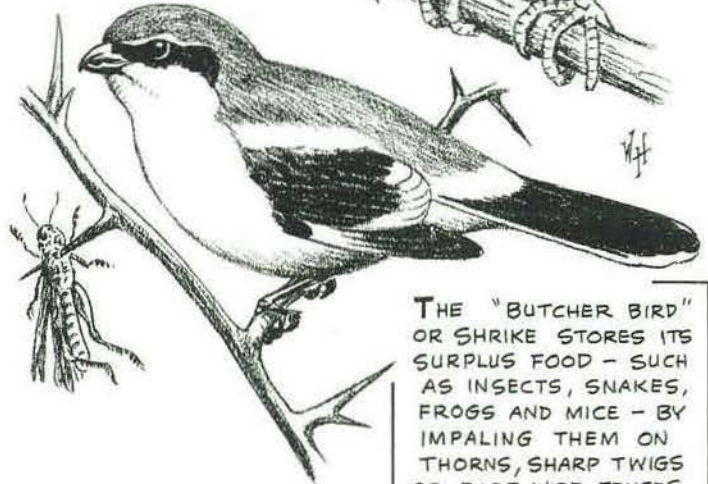
IN 1952 - FOR THE
FIRST TIME IN THE
HISTORY OF AMERICAN
ORNITHOLOGY - A
FOREIGN BIRD, THE
CATTLE EGRET OF
THE OLD WORLD,
UNAIDED BY MAN
APPEARED IN LARGE
NUMBERS IN THE U.S.
• NOW IT IS A
COMMON RESIDENT



THE WANDERING
ALBATROSS HAS
THE LARGEST WING-
SPREAD OF ANY
BIRD IN THE WORLD
• MEASUREMENT
TIP TO TIP $11\frac{1}{2}$ FEET



LARGEST LIVING BIRD
IN THE WORLD IS THE
OSTRICH • INDIVIDUALS
WEIGHING OVER 300
POUNDS AND AS MUCH
AS 8 FEET TALL HAVE
BEEN RECORDED •



THE "BUTCHER BIRD"
OR SHRIKE STORES ITS
SURPLUS FOOD - SUCH
AS INSECTS, SNAKES,
FROGS AND MICE - BY
IMPALING THEM ON
THORNS, SHARP TWIGS
OR BARB WIRE FENCES

AUGUST 1970

official publication of the
Game & Fresh Water Fish Commission
State of Florida

★

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The Cover

Big and tawny—with round and yellow eyes—the Florida Panther remains mystery cat of the Southeast. Whether wilderness areas will remain for their survival is difficult to predict. See page 4.

From A Painting By Wallace Hughes

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Photo By Jim Reed

THE PANTHER is, always was, and always will be a mystery cat. Even in the days when it was plentiful and quite secure in Florida and the rest of the country it was little known, excessively feared, publicly maligned, relentlessly hunted—but honestly admired. The strength and grace of this great cat is still easy to admire and respect.

Today, with its numbers and distribution drastically and unalterably reduced from what they were, say, at the turn of the century, the mystery and myth of *Felis concolor*, the panther, cougar, catamount, puma, “painter,” or mountain lion, seem to have grown.

Florida is the last stronghold of the remnant population of these magnificent animals in eastern North America (*F. c. coryi*, the Florida Panther).

In the spacious, formidable Everglades country some panthers have always lived. But in the last few years some fairly credible accounts of panther sightings have accumulated indicating that the big, tawny cats may be making something of a comeback in more northerly parts of the state—in areas virtually devoid of panthers in recent times.

Now, wild-eyed tales of screaming panthers on the prowl, especially of the elusive and altogether legendary *black* panthers, have never been scarce. Many slightly sensational panther stories make the

Mystery

news in Florida every year. Serious investigators, however, both professional and amateur, can usually spot these Barnumesque “indulgences in the extraordinary” and will eliminate them when adding up their panther reports.

On the other hand some newspaper stories and firsthand accounts of panther sightings are just too accurate to be cast aside. Even better evidence occasionally comes to light. Like, for instance, a “murdered” or an “executed” panther!

Though unfortunate in their circumstances, consider these two cases:

In the spring of 1967, a panther was killed in the Ocala National Forest by *somebody*. The catkiller apparently knew he was in violation of Florida law, though, for no publicity was sought; apparently no trophy was displayed. Personnel of the Game and Fresh Water Fish Commission in Ocala recovered

portions of the carcass from the woods. (The panther has been a fully protected species in the state since 1958.)

In March 1968, the Citrus County CHRONICLE, a weekly newspaper, carried a photograph of a full-grown panther killed by a sheriff's deputy. It had been reportedly attacking cattle on a farm near Inverness, according to the photo caption. True to the Code of the West, the outlaw paid with all nine lives for chancing too close to the settlers and taking easy prey.

Cross off two Florida panthers—no longer endangered.

Beyond these two cases of actual kills, nobody can make real claims of the cat's presence, of course, *except the men and women who say they have seen one*. Here are some reports of such sightings that seem to us to have the ring of authenticity, based only on the original reports. No case was investigated further. The reader can make his own judgments. (We only *hope* all or some of the reports are true—for the sake of the panther, which, after all, is listed as an endangered wildlife species by the U.S. Fish & Wildlife Service, which estimates its

total numbers at between 100 and 300 and gives its distribution as "Collier, Lee, Levy, Hendry and Monroe counties, Florida, and rumored around St. Marks [National Wildlife] Refuge in Wakulla County, Florida."—Compiled in 1966.)

In October 1967, the TAMPA TRIBUNE published an item about what were thought to have been panther tracks—found at Holmes Beach on Anna Maria Key on the Gulf in Manatee County. The tracks measured 3¼ inches across; the stride, 37 inches, according to the article.

Cat on a leash? Practical joke? Possibly, but some of these prints were on the beach and there was no mention of any other type tracks around—of man or beast.

In any event, the dimensions are about right. The track of an adult Florida panther measures something like 3 inches long by 3½ inches wide. Add an inch both ways for very large specimens, particularly the prints of male panthers, which get slightly larger and heavier than females. (An unusually broad paw print measuring 6¾ inches was once recorded for a puma [panther] killed out west by a government hunter.)

(Continued on next page)

Cat

By GENE SMITH

Panthers eat every size and description of live bird and mammal, but their mainstay is deer. It finds abundant natural foods—there is no cause to fear the Florida Panther, and will generally avoid even remote contact with people. It ranges from about 10 miles in a night to 50 or more in a week, usually traveling in direct line as opposed to the meandering (much smaller) bobcat.

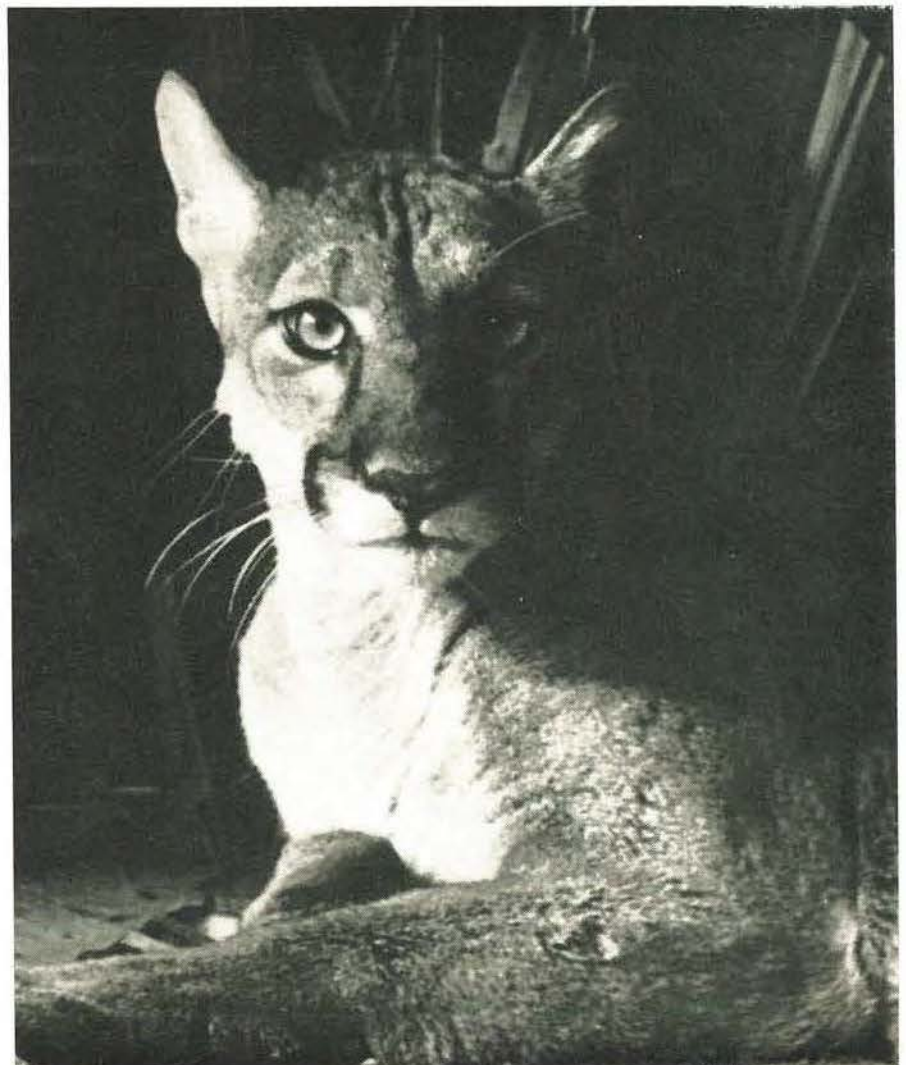


Photo By Bob Dahne

(Continued from preceding page)

In checking alleged panther tracks, recall that cats wear their claws sheathed when walking. Panthers leave no claw marks except in emergencies. This fact alone should eliminate the possibility of panther prints being confused with the tracks of a big dog. Too, the heel pad of the fore foot is larger than that of the hind foot, and a panther *usually* places its hind paw partially over the print of the fore paw.

The next case also occurred in October 1967. The BRANDON NEWS reported "footprints of a large Florida panther and a trailing cub" at Lithia in east Hillsborough County. The tracks of this adult, found in soft earth following an evening rain, reportedly measured four inches—entirely believable. The pads of a 100-to-150 pound panther treading soft ground would undoubtedly spread somewhat, although, as we pointed out above, the cat may have had a full 4-inch paw.

As for the probability of a cub—more correctly called a kitten—if those really were panther kitten tracks it is all the more encouraging for the species. Panthers breed only every second or third year after sexual maturity, giving birth to from one to four young per litter—usually two. The kittens remain with their mother for up to two years, then seek mates of their own. The small prints at Lithia, if they were "for real," were probably made by a 7 or 8 month old kitten if our information is correct that the young are born around February in Florida. (A lot of "ifs," sure, but we said it was a mystery cat, remember!)

The ORLANDO SENTINEL had a panther story in a November 1968 edition. This cat was reportedly seen absolutely clearly by a Lake County disc jockey as it strolled casually across the radio station driveway at Clermont.

Wildlife officers and local police checked the tracks, according to the writer, and agreed they appeared to have been made by a panther. And the announcer, when questioned, insisted he knew a panther when he saw one.

Leon County had an eyewitness report of a panther sighting in 1969—under most unusual circumstances. Wakulla County also had a sighting reported last year.

Panther kittens are as cute as any kittens. They can bite and scratch, too, after a few weeks, although they mostly rely more on Mom and their protective coloration for safety than their own tiny teeth and sharp claws. Panthers have a good reproductive rate, but they don't breed every year.

In April '69 a workman reported having watched—literally studied a "half-grown" panther "for about 5 minutes" *through a surveyor's transit!* The animal was taking a leisurely walk, in broad daylight, in the Lake Talquin vicinity southwest of Tallahassee.

With that instrument, in that light, and in that time, we tend to give the man credit for having been able to eliminate dogs, bobcats, otters, housecats, or any other mammals likely to be confused with the panther.

Finally, in September '69, another panther—certainly an animal fitting the panther description precisely—was reportedly seen at extremely close range—would you believe from seven feet away?—in the glare of automobile headlights. This one was sighted by a security guard near the electric power generating plant at St. Marks, Wakulla County.

As far as we know, neither of the north Florida sightings made the local press. It somehow seems noteworthy that both were reported directly to the Game and Fresh Water Fish Commission, apparently for no other purpose than to get them on record.

We hope such reports as these keep coming. *Vive la* mysterious cat, the panther—playful enough to chase its own tail or toy with a grasshopper; powerful enough to kill and drag off a fullgrown horse; smart enough, most of the time, to avoid contact with that other large predator, man. ●

Photo By E. M. DeFoor



Fish Management Notes

THE GAME AND Fresh Water Fish Commission has entered into an agreement with Florida A & M University, Tallahassee, to establish an aquatic entomology research laboratory on the grounds of the Blackwater Fish Hatchery, located in the Blackwater River State Forest in Santa Rosa County.

In announcing the agreement, Dr. O. E. Frye, Jr., Commission director, said a hatchery building has been made available to house the laboratory.

According to Dr. William L. Peters, assistant professor of entomology at FAMU, the aquatic plants and insects found in the Blackwater River—which is the study area—present an opportunity for the scientific study of ecology not found in any other body of water.

“The Blackwater probably represents a condition that existed in many rivers of the world prior to pollution and other ecological changes.

“The laboratory’s location near the study area will accelerate the research and eliminate the necessity of transporting samples and specimens some 200 miles to the University laboratory,” said Dr. Peters.

Official action on the agreement came at the June meeting of the Commission in Tallahassee.

THE STRIPED BASS population in Lake Talquin Fish Management Area is “alive and well,” and beginning to break growth rate records for the species, according to F. G. Banks of Tallahassee, assistant chief of the Fisheries Division.

The first striper fingerlings of the current experimental stocking program were released in the 8,850-acre impoundment, located in Leon and Gadsden counties, in June 1968. The young fish have weighed in at 3½ pounds and up to 18 inches in length.

Banks says, “The average growth rate for striped bass on the eastern coast is 13 ounces for 2-year old fish. The Talquin fish exceed the average weight by more than two pounds and the average length by more than six inches.”

Approximately 50,000 two-inch fingerlings were stocked in the lake in '68. A June 1970 release consisted of 64,500 fish, reared to fingerling size at the Commission's Richloam Fish Hatchery in Sumter County and Blackwater Hatchery from fry produced at Monck's Corner, S. C. and flown to Florida.

Nearly a half million stripers have been stocked in the waters of Choctawhatchee Bay, also in northwest Florida, by the Bureau of Sport Fisheries & Wildlife, U.S. Fish & Wildlife Service.

Hook and line catches of young striped bass are becoming quite common in both Lake Talquin and Choctawhatchee Bay but the experiments are still just that, according to Banks. Extensive striper stocking operations will not be undertaken by the



Old tires make inexpensive, long-lasting easy to make fish attractors. These are tied in bundles of seven; drilled to allow air to escape. After installation they are marked for anglers.

Game and Fresh Water Fish Commission until results of the past two years' work in several research lakes around the state are known and prove satisfactory. Only then would stocking be extended to other inland waters, he said.

FISH ATTRACTORS are nothing new, but in recent years there has been a renewed interest in constructing—rather, installing—physical structures in fishing waters, around which fish invariably tend to congregate for food, shade, and cover in which to hide. The result, naturally, is that fishing around a fish attractor is normally better than it is in open water over a plain bottom, except at bedding time.

Fish attractors have been constructed of everything from treetops and brush, metal drums with cutouts, car bodies, and broken down refrigerators and washing machines to concrete blocks, clay pipe, and old automobile and truck tires tied together, punctured, and sunk in orderly fashion in water deep enough to cover them well.

The only thing about fish attractor construction to date in Florida lakes is that it has been rather a “hit or miss” proposition. Several biologists, with the aid of local residents and sportsmen clubs, interested bystanders, and fellow Commission officers, have installed attractors. In most instances where they remained intact and properly marked, fishermen seemed to indicate they worked—they attracted catchable fish—concentrated more fish in less water than in areas without attractors. But nobody had followed up such an installation program with a proper evaluation of its effects, pro or con.

Such a study project is underway in Florida's Lake Tohopekaliga in Osceola County. One of the jobs Project Leader/Fishery Biologist Robert L. Wilbur is undertaking under his Habitat Manipulation Study, a D-J research project under the Federal Aid in Fish and Wildlife Restoration Acts, is to find out how well fish attractors of several types do—or don't—work. ●

Wildlife Officer Notes

A LARGE QUANTITY of illegal fishing equipment has been seized by wildlife officers in the Northeast Region in recent months, according to Capt. F. E. Johnson of Lake City, regional enforcement supervisor.

Fourteen boats, 7 outboard motors, 31 illegal fish traps (wire baskets), and nearly 400 feet of gill nets—plus a quantity of freshwater game fish and catfish—were taken as evidence in the cases.

Twenty-six persons were arrested in connection with the use of the unlawful fishing devices, which were pulled from the waters of the Suwannee, the Withlacoochee, and the St. Marys rivers and from several lakes in the region.

Fines in those cases already settled amounted to well over \$600.00. Other cases are still pending. Loss of their equipment by convicted violators will probably total more than the fines.

Under provisions of Florida Statute 372.31, conviction results in forfeiture of all illegal fishing equipment to the Game and Fresh Water Fish Commission.

The arrests were the result of long hours of surveillance in areas of suspected fishing law violations, according to Capt. Johnson.

Participating in the continuing operation, and credited with the arrests to date, are Lt. W. H. King of Live Oak, area supervisor, and wildlife officers H. L. Walsmith, Live Oak; C. L. Hawkins, O'Brien; R. K. Mitchell, Jasper; C. T. Wright and F. T. Gotcher, Macclenny; Eddie Reynolds and J. R. Greek, Perry; George Hendry, Madison; W. E. Edwards, Mayo; and J. R. Doxey, Trenton.

WASHINGTON COUNTY Wildlife Officer Claud J. Hicks of Vernon retired in June after 22 years service with the Game and Fresh Water Fish Commission. He was 65 in May.

Hicks was born at Graceville in Jackson County but lived and worked in Washington County most of his adult life. Before his employment by the Commission, on June 1, 1948, he had been engaged in farming and construction work.

Mrs. Hicks is the former Hattie Cook of Vernon. They had six children, five of whom are living.

Officer Hicks received a number of commendations during his career in wildlife law enforcement. He will be presented by the Commission chairman with an engraved gold badge and a framed certificate of appreciation in recognition of his many contributions to conservation as a Florida wildlife officer.

He will continue to make his home in Vernon.

IF YOU HAVE imagined the life of a wildlife officer is interesting, varied, and sometimes hectic—oc-



Photo By Laurence Rossignol

The use of traps and baskets to take freshwater game fish is a serious violation of state conservation laws. Convicted violators stand to lose plenty—including their boats and motors.

asionally even a little dangerous—you're absolutely right.

In activity reports for the months of May and June 1970, for example, officers around the state recorded such diverse involvement as:

Attendance at three different kinds of training meetings or schools (to study newly-passed legislation, to learn mob control, and to complete the 200-hour Police Standards School required of all new officers); doing construction work as well as instructing at youth conservation summer camps; taking annual Merit Officer proficiency tests; engaging in both standby and active riot control duty and emergency evacuation duty during floods; answering the daily citizen complaints about the presence of alligators—the top problem for many an officer in central and southern Florida; and transporting newsmen and others on official business into the Everglades, where high water earlier threatened the deer herd—again.

The usual number of arrests for spring fishing, hunting, and boating law violations were made—the result of an endless cycle of land, water, and air patrol. But there was one unusual twist when alert officers found three men in possession of narcotics in a wildlife management area. (These were not the first dope cases in the state involving Florida wildlife officers, however.)

Besides all his other duties, the average officer completed his share of survey-taking, assistance with game, fish, information-education, and communications work projects, meeting attendance, and paperwork—the considerably important recordkeeping and report-making that mark good officers everywhere.

A few spring vacations were approved, and, according to the June report, one "brave officer" even got married. ●

Fish Facts

FISHING

more and more water studies are needed these days—certain materials may not harm fish, but completely destroy their survival requirements

By CHARLES WATERMAN



YOU CAN ROUGHLY classify fishermen as specialists and opportunists. I know bass fishermen who are reluctant to admit that any other fish is more than a water pest. I know saltwater fishermen who scorn all freshwater species, and freshwater fishermen who become upset over the word, "brackish."

I also know fishermen who are willing to fish for panfish if the bass won't strike, and are eager to listen if you have any other ideas. I have had a bass phase, a freshwater trout phase, a snook phase, and a bonefish phase myself. I believe I now have more fun than when I was in one or another groove. Oh, I wouldn't spend the rest of my life fishing for mudfish or gars, but I am past the point where I consider an unexpected species to be an intruder.

A guide or charter boat skipper not only should be an opportunist but should be able to sell clients on the idea. Almost all of the better ones do it. A good example is Captain Royal Melvin over at Destin, which is one of the fishingest towns I know of with forty-some charter and party boats, a bay containing quite a few saltwater trout and some newly-introduced striped bass, and freshwater fishing nearby.

I went prancing confidently over to Destin to fish the cobia run which takes place along in April every year, generally running well into May. I got there with the fish nearly all gone. I had just left the east coast where cobia arrived by the thousands the day after I moved out. You can't win them all.

But Melvin, who had promised to take me fishing, announced we might make it with some king mackerel that were showing up three or four miles off the coast. I went out with him, Sgt. and Mrs. Bill Barrett of the Air Force, and Rick Hayles. Through meticulous use of his fathometer, Melvin located a spot the kings were using and it turned into a good day, even though the cobia had moved on. We also caught some bonito.

Then, to keep everybody happy, Melvin slid back into the Destin pass and let us catch blue runners on some light freshwater tackle. Hayles, who had been busy as a bird dog (or a charter-boat mate)

all day, ran into a warmouth-perch-fishing friend at the dock who said all it took was some crickets. Last I heard, Hayles had forsaken the 61-foot charter boat and king mackerel and was heading for some warmouth.

The moral is that some fishermen and some captains can be happy opportunists.

LEAST UNDERSTOOD of all among fish management subjects is the business of eutrophication of lakes, a problem which seems filled with conflicting pronouncements. Let's face it in small, inexpensive words.

A lake must be fertile, to an extent, to support fish. Drop a bunch of bass or bream into a stainless steel pond with no plant life and with distilled water and they'd have nothing to eat—starvation. Fertilize a lake by introducing very small plants and animals and you have the beginning of a food chain. Everything has something else to prey on and conditions are right for a good population of game fish, which are fundamentally predators. Now add an overabundance of nutrients through crop fertilization and sewage and the balance swings the other way. You can have too many plants.

(Continued on next page)



Crewman Rick Hayles brings king mackerel on board Captain Melvin's charter boat. When the cobia run ended, Melvin was after something else immediately.

(Continued from preceding page)

Blue-green algae, which turns the water a sick green, can be an end result of overfertility. Too much of this upsets the chemical balance needed by fish and means the end of good fishing. In a more obvious situation, fertility can lead to such heavy plant growth that small fish will hide so successfully the large fish cannot catch them. Thus, the small ones multiply to great numbers, are stunted by crowding, and may live on the young or spawn of more desirable fish.

The substances needed to make a lake or slow-moving river produce fish will become pollution if overabundant. Too much of a good thing. The only expensive word I'll use is eutrophication, which means the aging of a body of water, according to recent application. In some areas, lakes age very slowly, the process of going from near-sterility to overfertilization taking thousands of years. In other areas, a lake grows old in time measured in months. Theoretically, a lake eventually fills up with silt and decayed materials until it becomes a marsh and then dry ground. That is eutrophication. All of this is confusing to a fisherman and the sharper biologists generally admit it is confusing to them—not as a principle but as to detail.

Eutrophication or aging is hastened by pollutants. The popular conception of pollutants is material that will kill fish by actually poisoning them. Other pollutants are less dramatic, slower working and oblique in their destructive mission.

In trying to make a speech about water pollution, I used a phrase—secondary pollution—meaning that the pollutant itself did not kill fish but that the material led indirectly to a loss of fish. Perhaps I simply confused the issue but I still think that's an apt term. I am referring to any material put into the water which will eventually, through a chain of reactions, deplete the fish population as opposed to a material which will kill the fish directly.

I am not trying to explain the whole process, simply to point out its complexity.

H. G. "TAP" TAPPLY, an associate editor of *FIELD & STREAM*, has written a great many good things about the outdoors and has become an authority on the use of much outdoor equipment for both fishing and hunting. He makes, not for sale but for his own use, some of the most beautiful hair bugs I've seen. I've managed to get hold of a couple to make photographs. The design is excellent.

Hair bugs for bass are among the most attractive of surface fly-rod lures, especially on calm water, and are easy to cast with a light rod. Dependent on their construction, and whether you dope them to float high or not, they can be made to swim gently or to pop like true popping bugs.

Mr. Tapply, who lives in New Hampshire, uses



A near-perfect design of the hair bug tied by "Tap" Tapply, veteran outdoorsman and writer.

them effectively on smallmouth bass in clear lakes there and, of course, being an author and outdoor editor of long standing, has used them in many other places. He says that he can find no difference in the effectiveness of colors as far as the fish are concerned but makes them in brilliant hues, simply because it's just as easy and they look pretty that way.

His experience on bugs and colors are about the same as mine. I cite only two exceptions to this. One was the experience of an old fishing buddy, Jack Gowdy, who went to upper Michigan armed with both white and gray hair bugs (also called *powderpuffs* or *mice*), and fished in late evening on smallmouth lakes. The fish murdered the whites and ignored the grays. The other exception concerns the seeming added attraction of the bumblebee (yellow and black stripes) in Florida waters. Many good bass fishermen claim it shows a definite superiority much of the time. I have found it a good bug but my experiments are hardly conclusive.

ON THE FLY-FISHING subject, a trend of thought I find embarrassingly hard to leave, the Scientific Anglers people of 1012 Jefferson Avenue, Midland, Michigan 48640, have come up with some plastic fly boxes that are pretty hard to beat. These have translucent plastic inserts with a series of ridges standing up and with a slot the full length of each ridge. Actually, the "ridge" is made up of two strips that press against each other, and fit tightly enough to hold onto a hook that is forced between them. You can put a fly into one of those slots blindfolded. If you are using big bass bugs, one of the two inserts can be removed to leave the bugs more room.

If Scientific Anglers want my comment it comes out something like this:

The whole thing is too simple. After years of fooling with spring catches and flippy lids, what self-respecting fly fisherman is going to use something that just takes hold of the flies and holds them? Such things could mean an end to gadgetry which is what keeps a lot of fishermen happy, and I secretly hope something will go wrong with those boxes so I can go back to my more complicated schemes, however inefficient.

I AM NOW BACKING down a bit on some of my early statements about monofilament as opposed to braided line for casting reels. The manufacturers have improved monofilament line to the point that I now see little difference in efficiency. Well-thumbed mono will generally get more distance. Braided line may still have the edge in accuracy casting but it is very slight. The chief advantage in braided line is a slight tackiness when wet, which tends to prevent overrunning.

WITH ELECTRIC motors coming on big, paddles seemingly headed for the museum, and rowing becoming an ancient and lost art, there are more and more fishermen who run their outboard engines when casting shorelines or trolling. A long series of experiments has shown that the underwater exhaust of the outboard bothers fish more than the topwater exhaust of inboard boats. This has shown up especially strongly in trolling.

To get the exhaust topside there have been quite a number of strange gadgets attached to the smaller motors. The first I saw were at Crystal River years ago where the tarpon fishermen had found a topside exhaust didn't spook the fish. In more recent years there have been several devices worked out,

none of them on a production basis. The idea is to block off the old exhaust and to muffle the sound by running it through a batch of baffles, or a combination of baffles and water. I don't understand how it's done but some mechanics will undertake it for a price. I've seen no two devices alike. The going price for fixing such a dingus on a 6-horse motor seems to be between \$25 and \$50.

In some parts of the country there is a little legal problem if you want to get technical. Topwater exhausts are prohibited by law in some places because of the noise made by racing motors that use no mufflers. Actually, most of the topside devices make no more noise than the underwater exhausts, sometimes less, and they serve the spirit of the law if not the letter. Touchy business.

IT SEEMS LIKELY that the salt water fishing license will eventually be required by most states. Most sports fishermen are inclined toward it, feeling that added funds could help the preservation of coastline fisheries.

I hear a strong complaint from sports fishermen who feel that in order to get a salt water fishing license it will be necessary to enlist the help of the commercial fishing interests. Then, they say, the funds are sure to be spent in promotion of the commercial interests rather than in helping the sports fisherman. It's a valid worry.

The salt water trout, or weakfish, is an in-between species, providing a living for numerous commercial operators. The trout is endangered by destruction of his coastal habitat rather than by fishing pressure in the big picture. But on the other hand I know of some spots where large catches of trout are gill netted when they might be of more value in terms of tourist promotion than as menu items.

The salt water trout is a good game fish, especially when hooked on flats where he'll run. He takes artificials and isn't short on the fighting end in the larger sizes.

I am simply mentioning trout as an outstanding example of a fish that can serve both commercial and sporting interests but would work better for the sportsman in some instances if the commercial fisherman left it alone. This is one of the points of friction.

I have heard sportsmen say they were strongly opposed to a salt water license because it would be used to aid the commercial fisherman almost exclusively. The politics of such a thing is very complex but I suspect he may be right in his analysis, whether he is justified in opposition or not. Whether the sports fisherman would get benefits on the fringes or not is another question. The bitter pill is that the sports fisherman would pay the bill, whether he got the help or not. ●

A fly box sold by Scientific Anglers does good job of holding flies where they can be easily reached.





Photo By Bill Hansen

The hunting dog's acute sensory cells and nerves of its nose serve for "smelling out" game.

scientists are still learning from the animals

the Baffling World of Bionics

SINCE THE VERY beginning of recorded human knowledge, man has considered the snake and the bat to be two of the most mysterious and fascinating creatures, because of their unique sensory capabilities. Their strange and superior capabilities of vision, hearing, smell and communication have largely been responsible for their prominent role in the folklore and superstitions of many tribes and civilizations of the world.

From his earliest childhood memories, man is aware that animals have special and peculiar abilities—many far superior to human abilities by comparison. The common ant can lift a weight many times the mass of its own body. A hunting dog is unerringly guided to a covey of quail by its acute olfactory apparatus (the sensory cells and nerves of his nose). A porpoise can swim faster than a modern ocean liner, yet exerts little effort in doing so. The rattlesnake uses heat-sensitive facial pits to locate its prey and to warn it of approaching enemies. The Arctic tern travels some 22,000 miles round trip as it migrates from the Arctic to the Antarctic each year. These are only a

few examples of the remarkable characteristics of our familiar animal world—characteristics which have interested scientists in the past and which are receiving special study by scientists today.

Man has long sought nature's secrets and tried to use them to his own advantage. Perhaps tens of thousands of years ago a shivering cave man decided that fur-bearing mammals did not suffer from the cold as much as he did. He perhaps reasoned that the mammals were protected from the cold by their fur coat—so, he likely made a prompt conversion of such mammals into fur coats for himself and his family. Such attempts to copy animals were perhaps man's first attempt at research in any form.

Another imitation or adaptation from nature is the concept of the dagger and the knife, gained from a cave man's personal experience (a no doubt "touching experience") with the claws and teeth of wild animals. The American Indian, too, copied the protective markings and shadings of birds, reptiles, and frogs, and used these markings and other "props" to ambush their enemies and to make

it easier to hunt for food without being noticed by their prey. A more sophisticated use of this same concept was employed in World Wars I and II, and received critical research treatment in the tactical development we know as *camouflage*.

The science devoted to the creation of techniques and instruments—so-called “hardware”—that perform the highly sophisticated functions previously performed only by animal sensory organs is termed BIONICS. The name was coined about 10 years ago by Dr. J. E. Steele of the U. S. Air Force's Aeronautical Systems Division (ASD). Bionics comes from the Greek word *bion*, meaning unit of life (e.g., eye, ear, nose, etc.). Bionics, then, deals with the

blending of the talents of the biologist with the engineer to study biological sensory mechanisms for purposes useful to man.

Hundreds of engineers, biologists, biochemists, mathematicians and other professional scientists are studying problems which are relatively easy to understand, but which have tremendously complex solutions. All of these problems have a common objective: to duplicate in structure or function a complex biological system; to do mechanically, electronically, biochemically, or by some other method, what animals do as an ordinary daily accomplishment.

Let's consider a number of examples of attributes associated with familiar animals and how a scientific study of these attributes can be of benefit to man:

Many butterflies and moths have antennae by which they are able to locate and identify their own species, presumably via odor perception, from great distances. Through research, a modification of this communication system might reasonably allow one aircraft to locate and identify another in flight in time to avoid a collision.

The pit vipers, a group of reptiles including the rattlesnake, copperhead, and cottonmouth, are born with a unique heat-sensitive device. Located midway between the nostril and eye is a pair of facial pits used to detect the proximity of potential prey and enemies. A scientist at U.C.L.A. has recently discovered that a rattlesnake, if offered two identical balls to strike at, will always strike at the warmer

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Photos By Wallace Hughes

The cottonmouth, above, rattlesnake and copperhead have facial pits that are not only heat sensitive but serve as a striking “guidance system.” The organs are located between eye and nostril (note the arrow). Just as sensitive—to odors, not heat—are the antennae of butterflies, right, and moths that can detect the presence of mate up to a mile away.

By J. RICHARD THOMSON



Mr. Thomson, former Director of the Science Center at St. Petersburg, is now Administrative Analyst with the Medical Services Division, Tennessee Valley Authority.

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one—even though the temperature difference is only 0.1°C . On the surface of this facial pit, it has been determined that the snake can detect temperature differences as little as 0.001°C . Applications of a similar heat-sensing device could enable scientists to develop a much more sensitive heat-seeking anti-missile than the Sidewinder missile now in use. The medical profession could use such a sensitive device to determine the location of certain types of cancer cells which are slightly warmer than normal cells. Such an instrument could also be used to determine with much greater accuracy than has heretofore been possible, the depth of frostbite damage and to indicate surgical treatment of such cases. The depth of heat burns and radiation damage to skin could likewise be indicated by such a heat-sensitive instrument.

The homing pigeon's unique ability to orient itself in space, even in an unfamiliar locale, could aid in the design and development of navigational instruments. There is on record the observation that a homing pigeon released in Venezuela made its way back to Baltimore safely—a remarkable feat indeed! The Air Force and Navy are particularly interested in this natural ability.

The starfish secretes a viscous, natural adhesive that holds tighter under water than any manmade glue or adhesive yet devised. Plastic and polymer chemists are working with biologists and biochemists to uncover the starfish's secret.

Lazzaro Spallanzani, an early Italian scientist, proved in 1793 that blinded bats could forage for food at night equally as well as bats that had their eyesight. He observed that the stomachs of the blinded bats were just as full as those of normal bats after returning from a night's feeding flight. He found, however, that if their ears were plugged with wax, they could forage poorly, and if they were deafened, they could not locate food, even though they had their eyesight.

It has been proven in modern times that the bat listens for variations in the echoes of its own shrill vocalizations, and by interpreting the magnitude and frequency of these echoes (as compared to its original sounds) the bat can accurately gauge distances and navigate in total darkness without error.

This method of echo ranging is not unlike the applications used by the blind man who, tapping his cane and listening for the echo, can range and orient himself in space—however, his accuracy cannot hold a candle to the performance of the bat. The bat can distinguish its *own* cries from similar, if not identical, vocalizations of thousands of other bats in the same cave. The bat can use this echo ranging application not only for navigation, but for identification of food as far away as several hundred feet.

Military scientists are especially interested in this method of discrimination of unseen objects in the darkness, and in the bat's apparent immunity to "jamming" or interfering noise. Applications of this sensitivity can be used to separate "friendly" sonar (an acronym for Sound Navigation And Ranging) emissions from those of an enemy, and if the device were as sensitive as that of the bat, it would be immune to enemy "jamming" of our sonar or radar (an acronym for RAdio Detecting And Ranging). Navy researchers are investigating how certain species of bats can fly over the surface of the water and accurately detect and snatch fish from below the surface—apparently an air-to-water sonar system.

The spider is alerted to its prey caught in its web by the characteristic vibrations it senses in its legs. The spider can determine from the vibrations alone exactly what has been trapped, and is not in the least fooled by "tricks" played on him by investigators. Copies of this type of sensing device could find industrial application in quality control equipment, electronics, machining aids and the like.

Porpoises are highly intelligent, air-breathing mammals with an apparently effective language system. Their brain is considerably larger than man's and it is thought that the porpoise is as eager to communicate with us as we are to communicate with the porpoise.

The natural sonar system of the dolphin serves the animal with the same advantage that sonar gives the submarine commander: detection of depth and contour of the bottom of the sea, depth of the water above, presence of reefs, and submerged mountains or obstacles.

Exactly how frogs, below, bears, and other creatures survive and revive from hibernation could furnish valuable data for space scientists and surgeons. "Suspended animation" may one day be practical for space travel to planets. Any volunteers?

Photo By Lovett Williams





Photo By Wallace Hughes

An 18th century scientist discovered blinded bats could still feed and navigate whereas deafened bats could not. The amazing flying mammals were using SONAR centuries before military "discovered" sound navigation and ranging.

Various species of insects produce vile repelling fluids to ward off predators. Biochemical investigations of insect toxins provided the groundwork for the early development of nerve gases studied in World War II. The Navy has long searched for an effective shark repellent. It is hoped that recent research in bionics as applied to biological toxins will soon produce such a repellent.

There are countless other interesting applications of bionics. The wide scope of these studies is evident from these few additional examples:

1. Ability of honeybees to navigate by a fix on the sun. Their eyes are apparently sensitive to polarized light and they navigate even when the sun is overcast. Studies of such navigation by polarized light have helped in the development of navigational instruments near the polar regions, where magnetic instruments are ineffective.

2. The homing ability of swallows, salmon and the albatross.

3. The ultrasensitive odor-detection and discrimination of the bloodhound.

4. The mechanism by which the eye selects and correlates optical data prior to transmission of this information to the brain. Contrary to popular opinion, the eye is not like a camera (which sees everything in front of it); the eye sees only what the brain tells it to see. Scientists want to know how and why.

5. The joints of an animal's body are amazingly efficient. In engineering terminology they have a coefficient of friction of the order of 0.012! With similar specifications, revolutionary concepts of mechanical engineering may well be possible.

6. The noctuid moth has only a two-cell ear; yet it can hear the sound of a bat a hundred feet away. Research on this sensitive organ may lead to greater sensitivity in ultramicrophones for research and military purposes.

7. Electric eels produce more electrical energy per ounce than any battery man has yet devised. Concentration of such energy is of special interest to NASA scientists.

8. A variety of mammals, reptiles and amphibians hibernate during periods of cold weather. This slowing of the biochemical processes is of special interest to medical scientists. Knowledge of the mechanism of hibernation can be extremely valuable to induce in humans lowered metabolism for certain surgical procedures and as a distinct aid to space travel requiring long periods of time.

Bionics is yet in its infancy. Attempts to duplicate or mimic the fantastic senses of many of nature's creatures have so far been rather unsuccessful. There is every indication, however, that with continued effort scientists will eventually succeed in unlocking many of these age-old secrets, and as a result, man will be better able to cope with his own environment, whether here on earth, out in space, or on another planet. ●

THE NAME OF THE GAME is hunting the white-tailed deer; its theme song is "Autumn Leaves." It is bowhunting time!

Although legal targets include a variety of game species, by far the most sought after by the Florida bowhunter is the whitetail. The idea of taking a deer with bow and arrow holds strong appeal to more and more individuals. Adding to the appeal, no doubt, is a growing deer population in Florida, a generous season bag limit of three deer per hunter, and the fact that either sex may be taken during the statewide archery season, which runs from September 12 through October 2 this year. (No fawn deer may be taken, of course.)

But bagging a deer—buck or doe—with a bow and arrow isn't exactly easy, as many discouraged bowhunters have come to know. Actually, the ratio of kill success runs something like one successful hunter for every 20 hunting—and the one who is successful may not be the bowman with the most skill or experience! Many a toxophilite has killed a deer the first time out, so luck plays a major part in bowhunting, too.

Basically, successful bowhunting starts with the

proper equipment, or tackle. Besides bow and matched arrows, the serious hunter needs a good quiver, a shooting glove or tab to protect the tips of his bowstring fingers, an armguard as protection against possible bowstring slap, a spare bowstring, wax, bowstring silencers, replacement broadhead points, a small file, a sharpening stone, and, by all means, complete camouflage attire.

The average price of a good quality hunting bow is in the neighborhood of \$50.00 or \$75.00, but if you want the very latest, a takedown model, it'll cost you about as much as the price of a custom rifle. (Incidentally, in Florida, the use of crossbows for hunting is illegal.)

Usually, the heavier the bow's pull at full draw, the faster the flight of its arrow and flatter the trajectory.

But don't let these qualities of a powerful bow mislead you.

It is easier to be "overbowed" rather than underpowered. Many beginners sadly learn that flexing a heavy hunting bow two or three times in a sporting goods store, and later shooting it repeatedly in field practice, are two different things!



archery season can add
exciting hunting
experiences—don't pass
up the chance to join

Autumn Arrows

By EDMUND McLAURIN



Photo By Lovett Williams

A tree-standing bowman has a distinct advantage—deer don't look up. Arrow release must be achieved with a minimum of motion, however, and in case of a miss a second shot often is possible. Either sex deer is legal during archery season.

Select only such bow power as you can comfortably control and hold steadily for the critical seconds of accurate aim and smooth arrow release.

Most hunting bows carried afield possess 45 to 55 potential pounds of arrow starting power, at standard 28 inches of arrow draw. A few are seen that pull 60 pounds or more. These are suitable only for persons whose strength and shooting experience provide the necessary smooth control required.

Quality arrows—matched for spine, weight and draw length—are equally important.

You can expect to pay from \$18 to \$40 for a dozen top-grade broadhead hunting arrows. Those with aluminum or fiberglass shafts are especially durable. Don't try to get by with cheaply made arrows; they will give inconsistent performance.

Any archery instructor or experienced bowhunter usually is happy to help you select the proper tackle.

It must be carefully fitted to *you*, like a tailored suit of clothes. Better seek expert assistance, rather than take a chance of ending up with tackle that does not match your physique or field requirements.

Since likelihood of a killing hit is influenced by how close the bowhunter can get to his wild target, most hunters take care to camouflage human form identity as much as possible.

Head to toe camouflage clothing is customarily worn, and even faces and bows are often camouflaged.

To see without being seen is the keynote.

The serious bowhunter will take advantage of every bit of concealing natural cover when stalking game, or occupying a blind overlooking a used game trail.

Successful *stalking* of wary game, especially deer and feeding squirrels, calls for the woodsmanship of an Indian. The art is not quickly acquired. Every expert stalker can look back on a portfolio of memorable mistakes and unsuccessful stalks.

A beginner will usually do better by selecting a good spot and taking "stand," letting game come to him while he waits within a natural blind.

Ground level hunting blinds are easy to construct, especially if camouflage netting is used in combination with low brush.

The interior of a blind should be large enough so that the hunter can nock arrows, draw and shoot without having his arrow tip or bow touch the concealing netting or brush.

If there is not room to construct a blind in which one can move and otherwise get into unhampered action, or if a clear arrow flight path cannot be had, then it is better for the hunter to quietly kneel or stand in front of a patch of brush rather than behind it. In this situation, camouflage clothing and minimum movement are definitely essential.

Like a baseball thrown to home plate to cut off a runner, or a bullet fired long range at a target, an arrow takes a trajectory curve from bow to target. This parabolic curve is easily seen during the feathered missile's flight over average shooting ranges.

The pronounced trajectory curve makes it difficult to effectively place an arrow through a small,

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distant brush opening, as often frames game targets. The least contact of a flying arrow with a twig or even a dangling leaf can deflect it on a wild tangent course.

In most Florida bowhunting areas game habitat is generously interspersed with low, often thick, brush that not only tends to make full figure targets hard to see but offers considerable resistance to an arrow's passing.

Getting off the ground—even just a few feet—enables the hunter to locate game easier and see it more distinctly. Likely arrow deflection will be materially reduced, too.

The elevated view may be from a tree crotch or, more probably, from hunter constructed tree stand.

But advantages are not always with the elevated hunter.

Game may come into bow range behind the hunter, or at some angle that makes it impossible for him to change position and shoot.

Long occupancy of a tree stand brings on stiffness and cramps, combined with boredom when hours pass and no game is seen. Under such conditions it is conceivably easy for the nodding bowhunter to become momentarily careless enough to drop his bow or even to fall from his perch. It has happened.

A bowhunter who is a good shot at ground level may not be able to score from a tree stand, even though he has improved visibility "upstairs." The visual perspective and shooting angle are entirely different.

Once in a tree stand, even the best of bowhunters, including those with plenty of pre-season practice behind them, likely will release two or three arrows at some ground level object—just to get the feel of things. These shafts will be retrieved, of course, when the hunter is ready to leave the scene.

Because game does not always use the same trails once hunters invade the woods, many a hard-to-build, permanent tree stand has become practically worthless for hunting after the first few days of the season.

Likewise, remaining good ones have frequently been causes for serious dissension between their builders and so-called "stand jumpers." The former group consider a tree stand theirs by reason of the trouble and expense connected with its erection. They expect to be able to use their stands when on the scene.

The "stand jumpers," on the other hand, hold to the tenets, "first come, first served" and "possession (in this case, occupancy) is nine points of the law."

Understandably, sharp words have sometimes been exchanged.

A better solution to the problem seems to be more use of portable tree stands—those that can be taken into the woods, placed, used, removed, and taken home. Both homemade and commercial versions are now widely used.

One portable stand is simply a canvas seat temporarily slung between two trees. It is supported by nylon rope and is low enough to get into and out of without difficult climbing or contortions.

Another consists of a plywood platform that fastens against a single tree trunk with chains or nylon rope. It has an auxiliary support hinged to the underside of the platform, and is sharp at the opposite end so that it digs into the tree trunk under the hunter's weight like a climbing spike.

The latest innovation in portable tree stands is a commercially made model that is literally self-climbing.

Once the portable stand's aluminum support bars have been locked alongside and behind a tree trunk, the user inserts his feet in two sandal-like straps as he faces the tree. He then hugs the tree trunk and makes upward climbing effort, lifting his feet and the attached stand as it tilts from the released weight.

At the end of the climb the hunter straightens to a standing position, which automatically locks the platform firmly in place.





Something new for this year's archery hunting is a portable tree stand that loops on feet, left, climbs and firmly locks as the hunter climbs. Descent is basic procedure in reverse.

Descent involves the same basic technique in reverse—in short, sliding stages.

Known as "The Profane"—because it elicits remarks like, "The dawg-gone thing actually CLIMBS!"—the stand can be used on any sizable tree trunk that does not have climb-blocking limbs close to ground.

Naturally, the Forest Service people like the idea of portables. They do away with objectionable, illegal live tree cutting to build stands; also use of nails that would some day cause a logger with power saw to cuss loud and long.

It would seem that loss of easily identifiable human form, by camouflage, would tend to make the average bowhunter vulnerable to hunting accident.

Such rarely occurs in bowhunting. The fact that the bowhunter must get reasonably close to his quarry to score, and must further select a vital area of the target's anatomy as precise aiming point, preclude mistaken target identity.

More dangerous to field archers are possible self-inflicted mishaps.

Bowhunters have tripped and fallen against a razor-sharp arrow or had an arrow catch on brush, flip and imbed itself in leg or body. Others have fallen out of tree stands or been seriously cut by an arrow attempting to cross a fence with nocked arrow on bowstring. Poor quality bows have been

known to break and inflict injury to the shooter's face.

Actually, a bowhunter must be every bit as careful with his tackle and in his actions afield as the hunter using firearms.

Modern bowmen have demonstrated that, within practical shooting ranges, the bow and arrow can kill any game species that walks, runs or flies. Even such targets as elephants, lions, tigers, polar and grizzly bears, moose, mountain lions, and various other game species have succumbed to sharp, deeply penetrating arrows.

In Florida, every legal game species has been successfully taken with bow and arrow, along with unprotected birds and animals of varmint classification.

As might be expected, more arrows miss than connect when the quarry is quail or crow, but enough hits are registered by some of the more skilled bowmen to keep their interest up.

Excellent wing shooting practice is to shoot at aluminum plates or discarded phonograph records sailed away from the bow, or even thrown tennis balls and tin cans.

Bowman who have bagged favored games species—like deer, turkey and bear—are not inclined to forget their experiences or cease telling about them. Theirs is elation that lasts.

But those who have not always been successful have memorable experiences, too. Some are unusual, some near tragic, some amusing, some downright hilarious.

These, for example, are actual happenings:

A bowman on one of the first Ocala National Forest archery hunts was slowly and silently moving through the scrub in search of game when he rounded a thick patch of brush and came almost face to face with a Florida panther. The startled hunter lost no time in vacating the scene. He didn't even pause long enough to be conscious of the fact that the panther was doing the very same thing—in opposite direction. The hunter did not stop running until he reached his parked car, scrambled inside, slammed the door and rolled up the windows!

It is advantageous to wait until game is in sure shooting range before releasing a drawn arrow, but one hunter on a tree stand waited just a bit too long. He had spotted a buck coming in his direction, and with ready bow waited for the animal to walk closer.

It was obvious that the deer would pass right under his stand unless it changed course, which it did not. The waiting hunter let the buck approach closer and closer, all the time ready to shoot.

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When the buck was almost directly under the tree stand it unexpectedly quickened pace. To keep up with the target and make the shot before it disappeared under the stand, the bowman had to lean far forward—too far! He tumbled over the edge of his platform, practically on top of the deer. Later, back at camp, friends spent a good hour treating his cuts, scratches and scrapes. (He was lucky!)

Especially unfortunate was the experience of a bowhunter who had chosen to hunt the fringes of a swampy area. He knelt by a cypress tree and placed his spare arrows alongside as he prepared to wait for game with nocked arrow.

After some 90 minutes, a deer came along. The hunter shot and missed, but, as often happens, the deer was not spooked. Keeping his eyes on the target, the hunter slowly reached for one of the arrows he had placed on the ground within easy reach. He drew his hand back in pain as the fangs of an unseen Florida cottonmouth jabbed into his flesh. Fortunately, the right kind of first aid was nearby.

When a hunter is completely camouflaged from head to foot, which would include a hood or headnet, he usually loses all identity as a person, which, of course, is the whole idea.

Just such a confidently attired bowman was both surprised and perplexed when he encountered other hunters during the hunting day, each time being hailed by a friendly, hoarsely whispered, "Hello, Jack!"

Camouflage clothing is a must for the serious bowhunter. Some even disguise the bow, too, and smear hands and faces with a green "makeup." A camouflage headnet is one alternative, but limits visibility somewhat. Most archers choose grease paint.

Photo By Gene Smith



He did not know that his peculiar stalking stance in the woods, like a slowly moving jungle baboon with its behind sticking out, made him as personally identifiable to his friends as if he were carrying a painted name board.

That amusing occurrence had a howling sequel.

An experienced bowhunter, also wearing a camouflage suit and a camouflage hood made of Kamo netting, knelt beside a clump of palmettos to wait for deer.

It was one of those years when the novelty of possibly bagging a deer with bow and arrow held irresistible appeal to innumerable persons who had never tried the sport.

The camouflaged hunter had not been on stand long before another hunter, obviously a beginner and wearing—of all things, a conspicuously white T-shirt, approached and unknowingly stopped just in front of the kneeling, camouflaged hunter. The two persons actually were almost touching each other.

The bowman in the T-shirt stood for long minutes, hopefully scanning the woods ahead of him, but still totally unaware of the camouflaged hunter within arm's reach.

Finally, the temptation was just too much for the kneeling hunter. He very slowly and quietly rose to full height, placed a green-painted hand on the visitor's shoulder, and simultaneously gave vent to an uninhibited Tarzan yell! The fellow in the white T-shirt unknowingly broke the world's high jump record—and hit the ground running! It was a good thing he had a strong heart.

Finally, consider the modern treatment of an old Indian trick—masquerading as an animal in order to approach game.

It must have provided more laughs than deer, but among the records in the U.S. Patent Office is a patent grant to a hunter who visualized the use of a hollow cow figure in order to get near his quarry.

Well, two Citrus Management Area bowhunters figured the same idea would work if they used a "Trojan Donkey," a stage prop donkey suit. Each man, with his tackle, occupied a separate half of the suit, but with connected effect so long as they remained close together and moved in unison. However, on getting within shooting range of a deer, each half could take independent action.

Watching them progress through the woods was funny to privileged observers, but the side-splitting laughs came at noon when hunters on the move encountered the dismembered jackass sitting by the side of the road eating lunch. Each half was leaning against a tree, alternately munching a sandwich and taking swallows from a bottle of Coca Cola.

The upcoming bowhunting season is sure to add its own complement of memorable field experiences. Don't pass up the chance to share them. ●

Florida Bobcat

By GENE SMITH

WHEREVER YOU ARE in Florida, there's a good chance a bobcat has a den not too far away. This extremely adaptable wild cat is at home in every county in the state. And like the skunk, raccoon, opossum, and gray squirrel, all of which are wild animals "come to town," the bobcat is not particularly adverse to living in the suburbs of The Big City, either.

Stealthy creature that he is, though, and because he prowls mostly by night, few other than night duty policemen, milkmen, and paperboys ever see a bobcat in or near a residential neighborhood.

The bobcat (*Lynx rufus*) is almost a dead ringer for your gray, brown and black tabby—except for the wild one's 5-to-6-inch bobtail and its larger size. The bobcat's weight may range from around 10 pounds up to 40-odd. I have seen several emaciated, flea- and tick-ridden bobcats, however, that weighed no more than many a domestic, overweight ex-mouser.

The keen-sighted, quick-witted, sharp-clawed bobcat is a predator pure and simple. He makes his living doing what nature programmed him to do: to stalk, kill, and eat other creatures. Among its natural foods are rats, mice, pocket gophers (the mole-like rodents Floridians in rural areas call "salamanders"), rabbits, birds, snakes, and even a few insects. Remember when your own kitty daintly cracked and ate that big grasshopper or katydid?

A bobcat will also kill stray housecats, according to one authority, who recorded that the evidence—bones and skulls of ordinary cats—often turns up in a bobcat's lair. A very hungry or very lazy bobcat will occasionally attack a lamb or calf—or steal a chicken from the roost, although the latter offense, true to the children's story books, is most commonly committed by Br'er Fox and Br'er Weasel—either of which may on occasion be the bobcat's prey!

While a few fawn deer and nesting wild turkey hens also are taken by bobcats, by far the cheapest and easiest 'cat food is provided in abundance from the good, year-round supply of small game in nature's supermarket.

As a species, bobcats are most retiring, as we said. But sometimes one will regularly show itself in the same general area of the wilds or in the suburbs.

One big specimen I know of appeared often enough behind a northwest Florida subdivision that one delighted family looked forward to its irregular appearances and finally was able to get an excellent photograph of it through their picture window. It walked the opposite bank of a canal behind their house in late evenings. The "moat" separating it from its viewers' backyard apparently afforded all



Photo By Bill Hansen

Bobcats den under fallen trees, in creek and river banks, even under old deserted barn or farmhouse. At dusk they begin hunting but during overcast weather may be active during the day.

the security the cat desired, for it walked in the open, sometimes stopping for long moments to peer at the human doings a stone's throw across the way.

Not many bobcats are so casual. At least, not many old ones!

There is no question that the bobcat is one of the most ferocious fighters in all the wild world. Yet, for all its power and ferocity when cornered, I have known one bobcat, raised from a kitten in a zoo, that loved to have its ear scratched just like most any old cat. It was, from all appearances, a real live tame bobcat. I couldn't help but notice, however, that it was kept in a strong cage just the same. Like any feline, this one, too, undoubtedly had moments of aloofness, unpredictability, and outright meanness that made it untrustworthy.

Bobcats are good parents. They raise two or three kittens to a litter and care for their every need. They are also good swimmers—and climbers, of course.

Early one morning on our way to a squirrel wood some friends and I saw two bobcats in the road ahead. We first thought they were hounds. They showed no intention of moving as we approached, so the driver stopped in order not to hit them. Only when the car doors flew open and feet started hitting the ground did the cats make a move to flee. One jumped squarely into a broad, water-filled ditch and swam out on the other side. The other cat ran along the shoulder of the road a short distance to a narrower point before it cleared the water in a great, springing leap and was gone.

'Cat hunting with hounds is a prime sport in many parts of Florida. They tree after a fairly short race. And for those who don't own dogs, an exciting one-man hunt can develop from using a predator call and shooting bobcats, foxes and raccoons with rifle, bow and arrow, or camera. ●

Oh, Say Can You See . . . ?

(well enough to safely aim and fire a gun?)

By JOHN FIX

deterioration of the sense of sight over the years. Yet many a hunter—far removed from the romper age—insists he can see as well as he ever did simply because his sight is still adequate for activities less demanding—and for darn sure less potentially hazardous—than shooting and driving an automobile!

Some hunters who normally wear glasses will put them aside out of vanity or because eyeglass lenses have the annoying habit of blurring when pelted with rain. Other nimrods will not wear glasses while afield for fear of their shattering on impact with tree limbs and bushes.

In some cases, a man may be well aware of his defective vision but will hide the fact for fear that he will be obliged to give up hunting altogether. This is foolish. Most sight defects can be corrected with the use of prescription glasses.

But glasses alone will not eliminate hunting accidents, of course—not even those due solely to failure to properly sight and identify a target. There are a number of other factors that account for the annual hunting accident toll, as we stated earlier. Nonetheless, each of the following factors could seriously affect a hunter's judgment, his potential as a hazard to other hunters, and his accuracy when firing at properly identified game.

1. The hunter must be able to distinguish detail against a confusing variety of backgrounds. These backgrounds often blend with the protective coloration of the game being hunted—or vice versa. They can be deceptive because of optical illusions created by changing light and shade. If the eyes are not able to separate an object from its surroundings, the hunter—and his fellow hunter—may be in for big trouble.

2. The hunter must be able to focus clearly on both near and far objects, and to switch that focus instantaneously. This is particularly important in shifting the vision from the rear to the front sight and thence to the target area. Most people of middle age and beyond are bothered by the slow focusing problem, particularly where it concerns near objects like the rear sight. Glasses don't provide an easy solution to the problem. The simplest solution is to use a peep sight or a telescopic sight. Either will eliminate the need for adjusting the vision to the rear sight.

3. The hunter must be able to judge distance—quickly and accurately. The distant vision should be clear and sharp since most of the hunter's shots will not be at close targets. If you need glasses to



CONTRARY TO A popularly held, oft stated, and usually unchallenged misconception, hunting is one of the safest sports in Florida—and the country.

Of a total of 210 firearms casualties in Florida in 1969, only 50 were firearms casualties *while hunting*. Only nine of these were fatalities, according to the official state firearms casualty summary compiled annually by the Florida Game and Fresh Water Fish Commission. Just five casualties were mistaken for game.

There were 226,000 hunting licenses issued in the state for 1968-69, and another few thousand persons exempted from the license purchase because of age were also afield—with everybody going hunting as often as he could and staying as long as he could! Fifty firearms accidents in which hunters were involved is actually a very good safety record, statistically—but not good enough.

There are no figures available for horses, cows, pigs, and chickens, but there probably were a good many slaughtered by mistake. Although most of the "mistakes"—involving both people and domestic stock—were undoubtedly the result of poor judgment, carelessness, and, in the case of the farm animals, vandalism, *some* of the shootings were the result of accidentally "covering" the victim with a gun, and a *few* may have occurred *because the shooter simply could not see well!*

Few of us are born with perfect vision. Even if we have been so fortunate, there is a continual

discern distant objects, you will certainly need them here—and at their highest efficiency. (Riflemen especially need sharp eyes for distant vision, though in Florida even rifle shots at big game are not extremely long range as a rule.)

4. The hunter must be able to detect movement or the presence of objects above and below and to either side of the target. When our eyes function normally, we have two kinds of vision: central and peripheral. The latter permits the hunter to be aware of what is happening in the areas surrounding the central point of focus—the spot at which he is aiming. When the ability to detect movement and objects outside the area of sharp focus is diminished or lost, we have what is known as tunnel vision. This condition should be checked as soon as it becomes apparent. Not only is it annoying and dangerous if we hunt, drive, or even walk downtown—it is one of the characteristics of glaucoma, a major cause of blindness.

5. The hunter should be able to identify colors. Colorblindness to one or several colors is quite common. Probably a high percentage of those applying for hunting licenses cannot distinguish colors properly. Red used to be the traditional—and recommended—color for the hunter to wear. It has since been determined that this is a difficult color for the colorblind person to distinguish. Even for the normal sighted, red loses its distinctiveness at dusk. The recommended “safe” colors today are fluorescent yellow and orange.

And, speaking of colors, tinted sunglasses can distort them, remember. Those with yellow lenses are the worst. They're fine for the shooting range but not for the woods. True neutral gray lenses do not distort colors at all. Sage green lenses pass the colors the human eye sees best, so they distort very little. In buying sunglasses be sure to select a lens that enables you to retain your color perception. And if you haven't had an eye examination that included a color test, get one. Know how good, or bad, your color vision is.

6. The hunter should be able to perform under a variety of weather conditions and lighting changes. If the fogging of glasses or sunglasses, or the impairment of their efficiency by rain or fog, is a problem, consider contact lenses. A visored cap will also be helpful in keeping off rain and in cutting down on glare. And there are some new, highly effective lens coatings for regular glasses on the market. These help keep lenses clear. You do not have to give up hunting just because your eyes aren't what they used to be. However, if you find yourself continually overshooting, undershooting, or late-shooting on shots you once could make with fair regularity,

better schedule that eye examination—and pronto!

Every hunter should have a professional eye examination once a year—by an optometrist, or, if there is reason to believe a medical problem exists, by an ophthalmic physician, or ophthalmologist. Discuss with your examiner the sort of use to which you put your eyes normally and the kind of hunting you do. In all probability he will suggest plastic lenses for the outdoorsman should the use of glasses be called for. These cost a little more but they strongly resist breakage from impacts—even from stray birdshot—that would break normal lenses and therefore damage the eyes. Plastic lenses can also be made up in prescription sunglasses.

Keep in mind that in spite of the long statistical odds against getting shot while hunting, it happens. In no other sport is there such a high premium on brain, hand, and eye coordination. Good thinking, a sure hand, and keen vision can mean the difference between life and death—not only of the game being hunted, but, quite literally, of fellow hunters as well. No state's safety record—home, highway, industry, or hunting—is yet good enough to permit us to relax our vigilance and preparedness, our safety consciousness.

By paying close attention to our visual acuity and getting the proper help in correcting any problems, we can increase our hunting success and heighten the pleasure derived from unforgettable days and seasons afield. And we will be doing ourselves and our families—and our buddies—a good deed. Before this season really gets underway, get a check-up. Have those eyes examined. You will be taking a long step forward in doing your share to keep hunting a safe sport. ●



Eyeglass lenses are made tough and resilient today. The sportsman, young or old, should not neglect his vision.



Canoe Trails

through the
Everglades National Park

By MAX HUNN

THE FRENCH-CANADIAN voyageurs never sampled the sprawling South Florida mangrove wilderness, but they'd be at home there now following the canoe trails in the Everglades National Park.

Although canoes are more associated with the North Woods than with the Southland, they're perfectly adapted to the mangrove wilderness. Actually, they are better suited than boats for exploring much of the watery terrain. Canoes can travel on only inches of water, and that's all that's available in many sections of the Park.

Establishment of four, marked canoe trails of varying lengths are opening heretofore unreachable areas to the casual visitor if he doesn't mind exerting a little muscle power. Canoeing is not designed for TV-oriented, sofa-loving people, but if you're willing to paddle your own canoe, you can see fascinating portions of the wilderness. And with canoes wildlife-viewing possibilities are great, for there's no noisy outboard motor to spook the birds and animals.

How far you choose to paddle depends upon your strength and endurance. One trail takes you from Flamingo on Florida Bay on the northwestern corner of the Park, a distance of approximately a hundred miles. It's also the inland, small boat route. Obviously, you do not paddle this distance in one or two days. Several groups have made the trip, taking on the average of a week to negotiate the wilderness route. This trip is becoming increasingly popular with Boy Scouts, young, eager, and well equipped with muscle power.

However, the other three trails—far shorter—offer the best possibilities for canoeing adults. These





Photos By Kit and Max Hunn

Neophyte canoeists find the Hells Bay trail, above left, really challenging in the Everglades National Park. American egrets, left, refuse to leave the old Homestead canal as a canoe party moves along. White ibis, above, can be viewed throughout south Florida canoe trails. Calmer sections of Hells Bay trail, right, prove best for lunch and rest stops.



provide varied glimpses of the Park, yet are normally one-day affairs, unless you intend to camp out. There are primitive campsites along all of the trails, but you have to carry your own fresh water.

Easiest way for neophyte canoeists to see the remote portions of the Park is via the canoe-a-cades conducted by Park rangers at regular intervals during the winter (dry) season. The schedule varies, and details can be obtained from the Everglades National Park, P.O. Box 279, Homestead, Fla., 33030. The canoe-a-cades follow one of the three shorter trails, which offer the least problems to soft-muscled, city dwellers.

The three most popular trails all probe the same

general wilderness area—the region around Flamingo on Florida Bay—nevertheless, they're different. To really see the park, you should try all three.

Undoubtedly the easiest for the first time canoe enthusiast is the old Homestead Canal trail. It follows a shallow ditch dug early in the 20th century when man thought he could drain this flat land and convert it into farming and real estate development. Man was wrong.

Along this manmade waterway, now rapidly disintegrating, you easily can paddle to Bear and 'Gator lakes, prime birding areas most of the year. You also can take a side trip into the Fox lakes,

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noted for baby tarpon. Near Bear Lake, a short way after you've started your trip, you can still see the damage from the hurricane of 1935. Part of the mangrove wilderness never did recover, but slowly younger mangroves are covering the stark skeletons left by the big wind.

It's impossible to get lost on the Homestead canal route. There're only a few places where you can paddle out of the old ditch, and even if you do you quickly run out of water and discover your mistake. The Homestead trail is approximately 15 miles one way. You can camp on the dirt plug near the Gulf end of the canal. The old canal was plugged to stop saltwater intrusion in the late 1950s.

The second trail is from West Lake across Long Lake, down Mangrove Creek, through the Lungs (a pair of peculiarly shaped bays) into Alligator Creek. This route, too, passes through excellent birding territory in the general vicinity of the famous Cuthbert rookery, named for a plume hunter who first discovered and shot it out in the early 1900s. The West Lake trail is about eight miles one way, but it has more open water. This can make paddling difficult against any sort of wind. There's a primitive campsite on this trail, too. On calm days, you can return to Flamingo by paddling along the shore of Florida Bay, but don't attempt it with any wind.

Few will dispute the claim that the more rugged canoe trip is the third trail from near West Lake to Hells Bay. It starts from a small dock beside the

Homestead-Flamingo highway, a short distance inland from West Lake.

Although it's eight miles one way to the primitive campground, it seems longer because much of the trail has been carved through mangrove jungles. Often you spend more time pulling yourself along by the mangrove roots instead of paddling through the narrow, green tunnels. After the first few miles, however, you break out into open ponds and bays, much easier canoeing.

Most canoeists turn around at the primitive campsite, but you need not if you're carrying camping gear. The campsite can be used as a base camp for further exploring. However, don't schedule this during the rainy season—May through October—for the mosquitoes are ferocious. During the dry season, however, there is no insect problem.

Rental canoes are available from the Everglades Park Co., concessionaire at Flamingo, or you can bring your own. There's no fee for using the canoe trails. If you do bring your own canoe, a 14 or 15-footer is the most maneuverable. On some of the twisting waterways, the turns are so abrupt that a longer canoe is difficult to handle.

If you're going canoeing alone, make certain you check out with the District Ranger at Flamingo and advise him what trail you plan to follow. If something should happen, the rangers will have less trouble finding you. And don't forget to check back in, so no unnecessary search will be started. ●

Canoeists often find it easier to pull by hand on mangrove roots when exploring through the Hells Bay type canals.



Hunting Plans

HUNTING

one of the helpful conditions during Florida hunting seasons is the arrival of cooler weather—sometimes real cold—and it pays to be prepared



By EDMUND McLAURIN

MUCH PLEASURE is derived simply from planning and getting ready for a hunting season. Usually, the prelude includes the acquisition of some new item of equipment—needed or not. It may be a new shotgun, rifle, scope sight, or hunting coat, or an inexpensive article such as a good pocket compass, a gun cleaning kit, or just a pair of rawhide boot laces. There's still a bit of excitement in the purchase, at least for most of us.

Every three years or so I like to buy a new big game rifle. Usually I don't need it. In almost every instance the old one fits me fine and, except for the normal scratches that come with hard field use, looks and functions like new.

It's just that periodically buying a new rifle renews my interest in hunting—like the bright blaze-up that occurs when somebody dumps old cooking grease in the campfire!

Sometimes the new rifle proves to be nothing more than a duplication of a model and caliber I formerly owned and liked—for example the pre-war Model 70 Winchester, the Remington 760, the Savage 99, and the Marlin 336—all tested favorites.

For me, it's that time again.

I have a wide selection. By rough count, I can choose from among more than a hundred models and grades of American-made center fire big game rifles. If I care to include the available foreign imports—as I do—at least 30 more candidates can be added to the list. The one best selection is not easy.

At the moment I lean toward either a deluxe grade, left-hand model Remington 760 slide action in .270 Winchester caliber, or the Finnish-made Sako bolt-action sporter, also in .270 caliber. Both have good performance records.

The Remington Model 760 is a very fast handling hunting rifle, whatever the caliber chosen.

Its accuracy is equally surprising. Fitted with a quality scope sight, or a Redfield Jr., Williams QC, Weaver, or Pachmayr "Lo-Swing" mount, the Remington Model 760 slide-action will deliver just about all the practical field accuracy that the average hunter can effectively use.

The Model 760's action is a strong one, quite capable of safely handling the high intensity .270, .280, .30-06 and .308 calibers as well as less potent center fires.

For years after the 760 first came out I effectively

used one in .35 Remington caliber for brush country deer and bear hunting. I know what the Remington Model 760 represents in a dependable big game rifle.

My interest in the .270 caliber Sako bolt-action sporter stems from its similarity to the long-discontinued Remington Model 721, once owned in .30-06 caliber.

The Remington Model 721 rifle was a fine performer. I regret letting it pass from my hands.

The Sako action is good, I know, and current versions have adjustable trigger pull.

Sakos have performed admirably for me in the past. I won't say a Sako is the most accurate production rifle in the world, as its Finnish manufacturer claims it to be, but from experience I know a Sako big game rifle can be carried into the wilds with every confidence in its eventual performance.

Even so, I—like you—want to inspect, heft, and shoulder a rifle before purchase, regardless of previous association with make and model.

Unfortunately, the Sako is not usually found in the average sporting goods store. Garcia Sporting Arms Corporation, a division of the Garcia fishing tackle firm, imports the Sako and distributes it through selected retail dealers.

To buy one you must either find a Sako retail outlet or order by mail through some local gun shop or sporting goods dealer willing to handle the special order—and Federally licensed to receive firearms in interstate shipment.

Why do I lean toward the .270 caliber? My objective for this particular purchase is an all-around rifle. I can have it in the .270 caliber. With the proper bullet weights, the .270 can be used effectively on a wide variety of big game, whether hunting the thickly wooded sections of our eastern states or out west.

The .270 has desirably flat trajectory and retains bullet velocity at the longer ranges. While the right weight and style of bullet can make it a one-shot killer in brush country, the .270 really shines when it comes to making killing shots at long range.

Far out killing power is there aplenty, even though the .270's recoil is relatively light. The hunter needs only to place his shots in the vitals of his targets—preferably in the chest, or area

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where heart and lungs receive bullet shock and quick killing effect.

The one drawback to the .270 is its potentially short barrel life, compared to barrel life of certain other calibers. Most .270 caliber rifle barrels are good for only about 4,000 rounds of reliable accuracy, because of the hot gases and the high bullet velocity the .270 cartridge generates.

However, if the .270 is also your personal preference, don't worry! At the current price for a box of .270 caliber ammunition, you would have to shoot \$1,170.00 worth of ammunition before likely needing a new barrel. Few .270 owners will ever shoot their hunting rifle that much.

QUITE OFTEN the best hunting days of the season prove to be cold ones. Especially is this true of waterfowl hunting.

It takes cold weather (in northern states) to bring in migrating species, and it usually takes cold, invigorating air to keep birds moving around after they get to Florida.

Even though Florida winter temperatures tend to rise rapidly once the sun is two or three hours above the horizon, it does get pretty cold some hunting days, especially in the predawn hours that are part of deer and waterfowl hunting trips.

Any reader who has long hunted deer or ducks on the Florida scene, and has experienced cold, and often wet, hunting can back me up on that basic truth, no matter how press agents extol the glories of Florida sunshine.

The thermometer hanging outside may read, say, a comfortable 45 degrees, but if the winter day is also marked by wind—even wind of mild velocity—the chilling effect of the weather is sharply increased.

Field tests made by the U.S. Army proved that even moderate cold *with wind* can equal subzero windless temperatures.

Deer and waterfowl hunters, particularly, need to dress warmly for comfort during the colder hours of predawn even though they may be able to shed some outer clothing during the middle of the day.

In recent years, lightweight insulated jackets and coats, including Army and Marine Corps surplus field jackets, have become very popular with Florida hunters, whether worn alone or in combination with a sweater underneath on the coldest days.

Every time I go into a sporting goods store I inspect and try on any hunting coats on display, even though I have several perfectly satisfactory hunting coats, all of which have been home-altered to suit my hunting needs.

Hunting coats and their incorporated features fascinate me. I suppose I am looking for all the

features I'd put in a hunter's coat if I were a garment maker who really wanted to be and remain a leader in this highly competitive trade category.

Some lightweight insulated garments I see are very good—having features that make them practical, serviceable hunting coats. Others simply fail to meet a hunter's needs in outer clothing, in my opinion.

An exceptionally fine garment is the "Antler" Model 4635 hunting coat made by M. Rubin & Sons, Inc., 555 Broadway, New York, N.Y., a firm that specializes in hunting clothing.

Although the #4635 "Antler" coat also can be had in blaze orange safety color, you may want the camouflage version, made of drab, noiseless, non-light reflecting cotton sateen. Underneath the water repellent outer shell is 4.4 oz. Dacron 88 polyester insulation.

The "Antler" hunting coat is 100% nylon lined in quilted pattern and is 33 inches long.

A practical feature is the inclusion of twin shoulder recoil patches, that both dress up the coat and make it suitable for use by either right or left hand shooter. There is a large back compartment, zippered game bag accessible from either side. The rubberized-lined game bag can be unzipped to provide a waterproof seat on wet hunting days. The "Antler" hunting coat has two large, flap-covered front pockets that contain concealed shell loops.

The large corduroy-trim collar can be turned up for extra protection against wind or rain. Sleeves have concealed style knit wristlets. They "snug" the sleeves to wrists but do not bind.

Duck and deer hunters and bowmen are sure to like the camouflage model "Antler" coat. It is quality made, yet retails at a reasonable price.

I liked the "Antler" hunting coat almost the moment I first picked it up and started to examine it critically. I liked it even better when I slipped it on.

IN THE ECOLOGY of the sea, little fish are eaten by big fish and the big fish that eat the little fish are sometimes gobbled up by still larger fish.

Much the same pattern is found in the business world of the sporting goods industry, especially in respect to the manufacturing of firearms and related accessories.

By now, just about every shooter knows that DuPont has long controlled Remington Arms, and that Olin Mathieson Chemical Corporation bought Winchester-Western 'way back.

Also, history is the day the Bangor Punta Sugar Corporation sweetened Smith & Wesson stockholders with ready cash and acquired that firm.

Only a few years ago, the fishing tackle firm of James Heddon's Sons consolidated with Daisy Air Rifle Company but, today both are controlled by

Victor Comptometer, although managed as separate businesses at distant locations.

Casey Chemical Company, which many years ago took over Bob Brownell's "Sheath" gun preservative, changed to Birchwood Casey (its current market firm name) after founder Walt Mason's death, but behind the scenes the company is now a division of Fuller Laboratories.

In fact, there have been many recent changes in manufacturing set-ups. Seemingly, the big fish of the stock market—the incorporated financial giants—are fast swallowing many small, independent businesses long known to sportsmen.

Lyman Gun Sight Company, one of the oldtimers in the sporting goods trade, has been sold to the Leisure Group, the same big corporation that bought High Standard.

But Williams Gun Sight Company remains an independent family-operated business and a constant source of new and practical shooting accessories, from sights to safeties. Pachmayr Gun Works is another productive independent.

Also still under family control—at least, at last report—are the firms of Charles Daly, O. F. Mossberg and Stoeger, three familiar names in the national firearms trade.

Olin, besides owning Winchester-Western, now controls the W. R. Weaver scope-making firm, and is also in the air rifle market as competitor to Daisy and foreign air rifle makers.

Smaller controlled manufactures of Olin include well-known brands of tents, camp stoves, lanterns, hunting boots, clothing, and even professional grade skis.

Browning Arms, like Winchester, once concentrated its trade efforts solely on firearms manufacture and marketing, but of recent years has added auxiliary lines—hunting clothing, boots and archery tackle.

Ithaca Gun Company has taken over 10-X, but founders Howard Smith and Floyd Sayles, who created most of the practical 10-X hunting and shooting coats, are staying on as technical advisors.

Two rivals of 10-X have changed owners, too. Bob Allen's Sportswear is now a sibling of Reaco, Inc., another corporation name prominent in the stock market, and the Red Head Brand Company, for decades makers of hunting clothing under the leadership of Clarke F. Hine, in Chicago, was subsequently sold to Zebco and operated at Tulsa, Oklahoma. However, Red Head's 1970 catalog reflects new ownership, at a Dallas, Texas, address.

Leupold & Stevens, Inc., well known makers of Leupold scope sights and the very fine Leupold "Sportsman" model pocket compass, has merged with Nosler Partition Company, manufacturers of Nosler hunting and target bullets for reloaders.

Universal Container Corporation, of New York,

has bought the once privately-owned Universal Sporting Goods Company, of Hialeah, Florida.

Challenger Mfg. Company has taken over Hopkins & Allen muzzleloading models and accessories.

The C-H line of reloading tools, one of the best known brands in the reloading tool field until the death of Charles Heckman, founder and spark plug of the original company, is being continued under Badger Shooters' Supply, Owen, Wisconsin. Quite likely, the new owner of C-H, Lew Bulgrin, will soon put the brand back among the leaders in reloading equipment—after others struggled vainly to do so. Bulgrin is a veteran shooter and reloader, and C-H reloading tools have always had excellent mechanical features.

Garcia Corporation, long recognized as a fishing tackle manufacturing firm, has extended its reach for the sportsman's dollar by purchasing Firearms International. Italian Beretta shotguns and handguns and Finnish Sako rifles are among its imports.

Penguin Industries, a corporate buying power that controls Hoppe's, now also owns Lachmiller Engineering, an established maker of reloading tools.

Alcan, a nationally known manufacturer of ammunition components, has been purchased by Smith & Wesson-Fiocchi. Since Smith & Wesson's magazine advertisements list Bangor Punta as control corporation of S&W, the new merger must represent action by a subordinate affiliate of Bangor Punta Corporation.

In addition to long-remembered firms that have changed hands, there are many new ones offering fresh ideas and product innovations to sportsmen-consumers.

Newcomers to the handgun industry constitute a particular example.

A generation or two ago, only trade names like Colt, Smith & Wesson, and Harrington & Richardson were generally recognized as the "quality" handgun lines. Then along came High Standard, and later Ruger, to challenge the reign of the big three.

Today, there are at least a dozen new firms producing good quality handguns. The same is true of rifle manufacturers. Remington, Winchester, Savage and Marlin can no longer be complacent.

Changed control, and the entry of new businesses as rivals to the oldtimers, means many long-familiar brand names and models will likely gradually fade away as changes are made by new owners.

Meanwhile, the products of newly founded businesses—so-called "strangers" to the firearms and sporting goods market—find ready consumer acceptance as new designs and product quality prove effective selling points.

Assuredly, the older brand names are now faced with keen trade competition. They realize it, of course, and are making their own bids for continued patronage with "old reliables," new models, and improved products. ●

A Drifter's Dream

By NANCY BROWER
Florida Department of Commerce

TRAVELERS ON U. S. 27 in north central Florida might think the local populace has heard something about "forty days and forty nights of rain." Many of the cars, pickup trucks and even motorcycles meeting them on the highway will be piled high with inner tubes, rubber rafts and other kinds of flotation gear.

There's been no flood warning. The tube-laden vehicles are converging at the source of the Ichetucknee River, a first-magnitude spring in the woods northwest of the little town of Fort White on U. S. 27.

The Ichetucknee is perhaps the best inner tube float run in the world. It is a drifter's dream—crystal clear, cool and pure, flowing over a white sand riverbed through a forest.

Mask and snorkel reveal an underwater panorama to the floater. Waving grasses, darting fish, bits of shells dating from the era when much of the Florida peninsula was under the sea, and occasional Indian artifacts are clearly visible.

Floaters begin their trip at the springhead and float three miles downstream to emerge at the bridge where U. S. 27 crosses the river. Large boats and motors over 10 hp are banned. Those whose only vessel is the innards of an old tire can float in quiet and safety.

The Ichetucknee tube run is a one-way trip. Return vehicles must be parked at the bridge before floaters launch themselves on the run. A roadside park is being developed here.

The current moves floaters from springhead to bridge in about three hours. The trip is effortless, save an occasional steering stroke or kick. Even so, appetites grow huge on the river and most flotillas devote a tube to a picnic chest or a wash-tub filled with food.

All sorts of people embark on this easy adventure—family groups, fraternities and sororities from the University of Florida at nearby Gainesville,

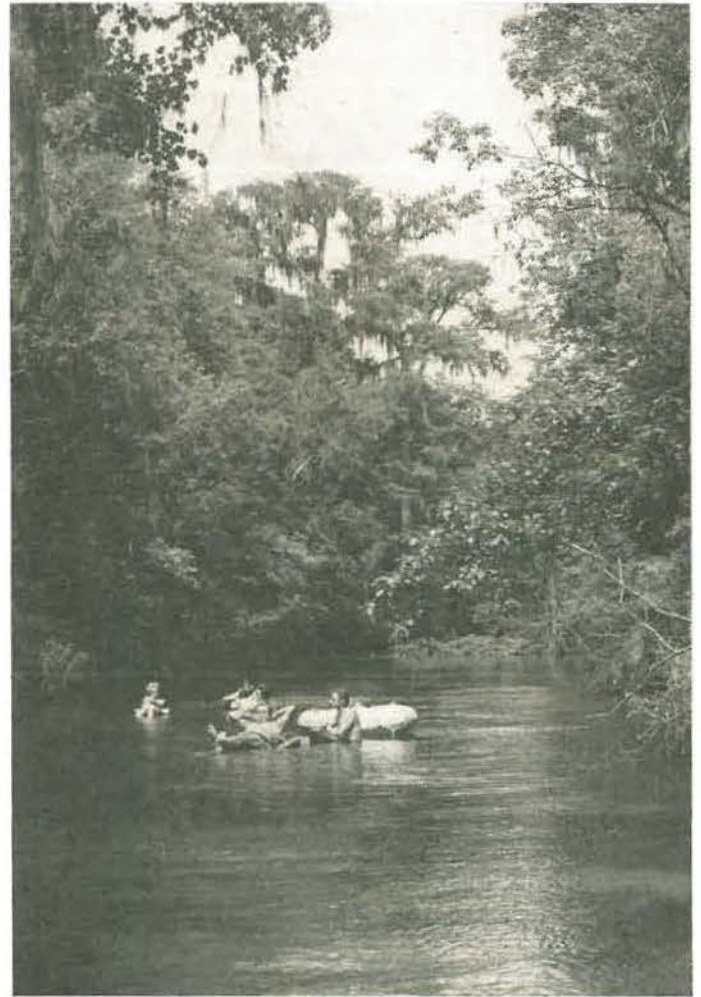


Photo By Johnny Johnson

Crystal clear and flowing through an unspoiled wilderness, the Ichetucknee River is probably the best of inner tube float runs in the world.

Sunday school classes, dating couples, SCUBA clubs, etc. Some groups float quietly, drinking in the beauty of the river and the green wilderness through which it flows. Others indulge in a lot of splashing and watery horseplay.

Drifting along on a shining stream may sound like something out of a dream, but the experience is real enough on Florida's Ichetucknee. And an ordinary tire tube is the only vessel needed for this luxury cruise. ●

Hunting Season Information

FLORIDA HUNTERS have a brand new 12,000-acre public hunting area in Putnam County for the 1970-71 season—the Hudson Wildlife Management Area, owned and made available by the Hudson Pulp and Paper Company.

The tract lies between Palatka and Interlachen in the Rice Creek Swamp area. It is bordered on the north by State Road 100 and on the south by State Road 20.

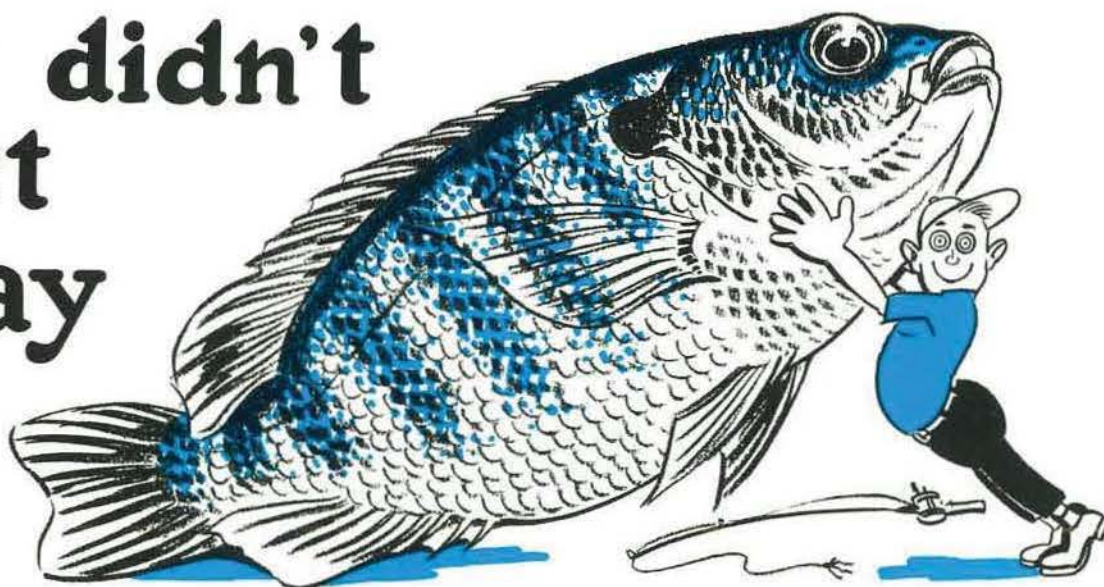
Hunting in the Hudson Area will be by still-hunting only; no dogs allowed, according to James A. Powell, chief of the Game Management

Division, Game and Fresh Water Fish Commission. Complete area regulations will be announced later, he said.

The new management area was established by Commission action in July. Under terms of the agreement with Hudson Pulp and Paper Company, the Commission will post the property boundary, plan and initiate game management practices therein, conduct and regulate public hunting and other uses of the area, and help protect the property.

The Hudson Area will be opened to hunting at one-half hour before sunrise on November 14, 1970, which is opening day for the Central Zone. ●

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ELIGIBILITY REQUIREMENTS SPECIES

LARGEMOUTH BASS

.....8 pounds or larger

CHAIN PICKEREL

.....4 pounds or larger

BLUEGILL (BREAM)

.....1 1/2 pounds or larger

SHELLCRACKER

.....2 pounds or larger

BLACK CRAPPIE

.....2 pounds or larger

RED BREAST

.....1 pound or larger

All fish must be taken from the fresh waters of the state of Florida, as defined by the Game and Fresh Water Fish Commission. Fish must be caught on conventional fishing tackle, with artificial or live bait, in the presence of at least one witness.

The catch must be weighed and recorded at a fishing camp or tackle store within the state by the owner, manager, or an authorized agent of the respective establishment.

FLORIDA WILDLIFE'S FISHING CITATION

is available without charge, to any and all subscribers to Florida Wildlife Magazine, and their immediate families, who catch any of the fresh-water game fish of the prescribed species and size requirements. Citation, showing recorded date of the catch, will be mailed to the applicant upon receipt of the following application form that has been properly filled out and signed.

Only fishing citation applications received within 90 days from date of catch will be honored.

APPLICATION FOR FLORIDA WILDLIFE FISHING CITATION

The Editor, FLORIDA WILDLIFE Date _____
Game & Fresh Water Fish Commission, Tallahassee, Fla.

Please send me the Florida Wildlife Fishing Citation with the inscribed data listed below:

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Address _____

City _____ State _____ Zip No. _____

Species _____ Weight _____ Length _____

Type of Tackle _____

Bait or Lure Used _____

Where Caught _____ in _____ County

Date Caught _____ Catch Witnessed By _____

Registered, Weighed By _____ At _____

Signature of Applicant _____

CUT OUT AND SAVE THIS APPLICATION BLANK



Florida Panther

Photo By Jim Reed

6-1--70 10 4-71
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**Florida
WILDLIFE**

12 Issues _____ \$2.50

24 Issues _____ \$4.75

36 Issues _____ \$6.25